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FEBRUARY 1943

A Brief Summary of Economic Conditions

Issued Monthly by the Bureau of Agricultural Economics, United States Department of Agriculture

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THE pace of war is speeded up, and with it, demands upon agriculture. Food production was expanded greatly last year. But it was impossible to expand production of crops and livestock as rapidly as production of mechanical weapons of war, or as rapidly as the growing demand for farm products. When the great victory drives in Europe and the Far East get underway, food production will become more and more important in relation to other war production. Food requirements will become acute with the liberation of all Axis-occupied territories. In preparation for the farmer's part in this new phase of the war, farm production goals have been increased above the levels announced in December. Farm machinery allocations have been raised. Incentive payments have been proposed for farmers who meet their goals for many of the crops most vitally needed. Deferment of essential farm workers has been ordered, and programs are being developed to help farmers get the labor they need. Farmers bear the heaviest responsibility they have yet known as they prepare now for spring planting. Upon their decision and action in the months ahead will depend much of the vigor of Allied fighting—and perhaps the lives of millions after victory has been won.

Commodity Reviews

PRICES: Forecast

Farm product prices for the full year 1943 may not average much above January levels, which were nearly 16 percent above the average for 1942. Prices received by farmers for their products averaged 157 percent of the 1909-14 level and 103 percent of parity in 1942, as compared to 91 percent of parity in 1941. By mid-December of 1942 they reached 114 percent of parity, in part because tobacco was selling well above parity and tobacco marketings were at a seasonal peak which increased the weighting given this commodity in the index of prices paid. A sharp upturn in truck crop prices was another important factor. The general index of prices received for all farm products averaged 178 percent of 1909-14 in mid-December, 157 for the full year 1942, and 122 in 1941.

The index of prices paid by farmers, including interest and taxes, averaged 152 percent of the 1909-14 level in 1942, rising to 156 in December. It averaged 134 in 1941. The parity price for each commodity rises and falls in exactly the same proportion as this index rises or falls, except for commodities on a post-war base. Parity prices for those commodities which have a 1919-29 base are tied to the index of prices paid on a 1919-29 base, which was 99 in mid-December and averaged 95 for the full year 1942. Parities for commodities which have a 1934-39 base are tied to the index of prices paid on a 1934-39 base, which was 126 in mid-December and averaged 122 for the full year. Prices received as a percentage of parity can be determined either by dividing the actual price by the parity price, or by dividing the index of prices received for any given commodity by the index of all prices paid by farmers, during the base period used for that commodity.

INCOME: Upward

Income from marketings of crops and livestock in 1943 may be 3 billion dollars greater than in 1942, if prices for the full year average about the same as in mid-January. However, the volume of feed purchased and the cost of labor and services will be higher than in 1942. Therefore, only a part of the increase in income will be available for family living, personal taxes and investment. Income from nearly all important farm products probably will be larger, with the biggest gains accompanying the greatest expansion in production—for example, hogs and poultry products. Goals call for a 12-percent increase in output of livestock products and a 5-percent increase in total agricultural production—assuming that crop yields per acre fall back to normal. Total cash farm income from marketings and Government payments is now tentatively estimated at 16.1 billion dollars in 1942, compared to 11.8 in 1941. Net income to farmers in 1942 is tentatively estimated at 10.2 billion dollars, compared to 6.7 in 1941.

LABOR: Tight Situation

Fewer workers were on farms January 1 than in any other month since 1925, when monthly records were begun. The number estimated, 8,171,000, was 116,000 below January 1942, 257,000 below January 1941, and 1,380,000 below December 1942. However, the supply of labor January 1, estimated at 56 percent of the 1935-39 average for the month, was slightly higher relative to the season than on October 1, when the index was only 54. Wage rates January 1 were 223 percent of the 1910-14 average—the second highest on record, exceeded only in 1920, and 3 points higher than on October 1, 1942. Completion of war

construction projects is reported to be easing farm labor scarcity in some local areas, because many workers apparently would rather return to farming than go into industrial plants further from their homes.

TAXES: Reminder

More farmers than ever before must file Federal income tax returns this year on 1942 income. Both farm income and the tax rates are the highest in history while personal exemptions and credits are the lowest. Returns must be filed by all those whose gross income is \$500 or more, if single or married and not living with husband or wife, and by those whose gross income is \$1,200 or more if married and living with husband or wife. A farmer counts as gross income all receipts from farm and from nonfarm sources, including the value of any merchandise received in exchange for farm products or services to others. Returns covering the calendar year 1942 must be filed with collectors of internal revenue on or before March 15, 1943. Forms can be obtained from the collectors and usually also from banks, post offices, and similar places.

Farmers who have not filed returns in the past will do well to get copies of the forms and start summarizing their 1942 operations immediately, especially if they have not systematically kept records on their business transactions. Those who have "kept books" of some sort will find the task much simplified. If books have not been kept the difficulties encountered in trying to remember the exact details of many transactions should make it clear that now is the best time to start a record for 1943 so as to be sure of having accurate and adequate information in the future.

FEED: Ceilings

Maximum prices for corn on all exchanges and in every cash and local market have been established generally at highest levels at which sales were made January 11. These levels

exceed 100 percent of parity when triple-A payments are included. Exempt from control are seed corn, popcorn, grain sorghums, sweet corn, broomcorn and local farmer-to-farmer sales of corn.

Mixed feeds for poultry and livestock have been under price ceilings since January 22. Ceiling price for each manufacturer and private brand dealer will be his cost of ingredients plus a margin based on his average mark-up over cost in specified months of 1942. A fixed mark-up of \$2.50 a ton over list price will be permitted for each wholesaler and \$7.50 a ton over list price for each retailer.

October-December disappearance of corn and oats was 16 percent above the same quarter in 1941, and the largest on record. However, stocks of these grains on hand January 1 were 9 percent greater than a year earlier. Wheat feeding increased sharply this winter. The corn carryover next October 1 is now expected to be about as large as last October 1.

Production of oilcake and meal during October-December 1942 was 18 percent larger than in the same period of 1941, and largest in history. However, livestock producers sought to buy more than was available. Mixers bought large quantities of high-protein feeds direct from crushers on a contract basis, leaving only small quantities available at wholesale markets.

Oilseed crushers in the Corn Belt are expected to continue at near-capacity production. Soybeans have been moving South as crushers there completed work on 1942 cottonseed. Total production of oilcake and meal will be further above normal next summer than it has been this winter.

Butterfat-feed and milk-feed price ratios are expected to remain above the 20-year average through the first half of 1943. A very favorable feed-egg price ratio is in prospect for the spring of 1943.

To further increase the supply of feed for livestock, goals for grain sorghums were raised to 12,000,000

acres, which is 23 percent more than the 9,755,000 acres planted in 1942. Under the proposed incentive payment program, farmers would receive \$8.00 an acre for each acre over 90 percent of the farm goal up to 110 percent.

In mid-January, the Office of Price Administration announced it would issue a regulation setting specific maximum prices for alfalfa hay.

HOGS: Slaughter

Inspected slaughter of hogs in 1942 totaled 53.9 million head, 16 percent above 1941 and slightly greater than the previous record in 1923. Inspected slaughter of 6.8 million head in December was the largest on record for any month.

CATTLE: Trends

Corn Belt stockmen were feeding a record number of cattle on January 1, 8 percent more than a year earlier. Increases, reported in all States but Minnesota, were greatest west of the Missouri River where corn supplies are back to predrought levels. Numbers on feed were also larger this year than last in North Dakota, Oklahoma, Texas, and Pennsylvania but smaller in all western States except California. The total for the western States is down 11 percent.

Feeders planned to market a smaller proportion of their cattle than last year in January and February, about the same proportion in March, and a larger share in April and later months. The cattle put on feed this year included a smaller proportion of heavy feeders (over 1,000 pounds), a larger proportion of medium feeders, about the same proportion of light weight cattle (under 750 pounds) and a smaller proportion of feeder calves.

For the first time since May, slaughter of cattle and calves in December was below the corresponding month a year earlier. Although production of beef and veal in 1942 was the greatest in history, the large number

of cattle now on farms and in feedlots is expected to result in still greater slaughter in 1943.

Total inspected slaughter in 1942 was 12.3 million head of cattle, 13 percent above the 1941 record; and 5.8 million calves, up 5 percent from 1941.

SHEEP: Feeding

On January 1, 1943, numbers of sheep and lambs on feed for market were 2 percent fewer than the record a year earlier. Estimate is 6,783,000 head this year compared with 1932-1941 average of 5,849,000. Numbers set a new record in South Dakota and Kansas, are second high in Nebraska, and increased in four of the other Corn Belt States. Increase of 8½ percent in the Corn Belt was more than offset by a decrease of 16 percent in other States. Numbers were down sharply in all feeding areas of Colorado. Total there, January 1, was down nearly 300,000 from last year, and fell below January 1 numbers in Nebraska and Kansas for the first time. Feeding was materially reduced also in Idaho, Wyoming, Utah, and Oregon.

Inspected slaughter in 1942 totaled 21.6 million head, 3.5 million larger than in 1941 and 4.0 million larger than the 1937-41 average. Cause was sale of many ewes and ewe lambs which ordinarily would have been retained for breeding stock. Lamb prices in early January were the highest since 1929.

DAIRYING: Prices

Action of the Department of Agriculture to increase production of corn and barley and to increase the supply of high-protein feeds available for immediate use will help dairy farmers produce the 122 billion pounds of milk requested in 1943. However, the general scarcity of labor and strong competition of hogs for available feed and labor, especially in the Midwest, will make it difficult to attain this goal unless the weather is unusually favorable.

Dealers' average buying price for standard grade Class I milk, 3.5 percent butterfat, was \$3 per hundred-weight for January—5 cents over December and the highest for any month since 1921. January retail prices, home delivery, averaged 14.46 cents a quart, highest for any month since early 1921. Federal subsidies, paid to distributors in the New York, Chicago, and Duluth-Superior market, to prevent increases in retail prices as a result of higher prices granted to producers, were discontinued December 31. The Office of Price Administration approved an increase in retail prices in the three markets until April 1.

OILSEEDS: New Goals

Acreage goals for two vegetable oil crops were substantially increased the latter part of January. The goal for flaxseed is now 5,500,000 acres, or 17 percent more than the 4,691,000 acres planted in 1942. The Department of Agriculture has proposed that farmers be paid \$10 for each acre over 90 percent of their flaxseed goal, up to 110 percent.

For soybeans the goal has been raised to 12,000,000 acres, which is 11 percent more than the 10,762,000 acres harvested for beans last year. Incentive payments of \$15 an acre to farmers on each acre over 90 percent of the farm goal, up to 110 percent have been proposed.

The goal for peanuts remains at 5,500,000 acres, which is 49 percent more than the 3,690,000 acres picked and threshed in 1942. Proposed incentive payments are \$30 for each acre between 90 percent and 110 percent of the farm goal.

WHEAT: Record Stocks

Sales of wheat for feed by the Commodity Credit Corporation at 85 percent of corn parity increased rapidly throughout January. From July 1 to January 30, sales totaled 85 million

bushels. In addition, during that period around 1½ million bushels of 1940-41 wheat under loan were redeemed by farmers at feed wheat prices.

Altogether, domestic disappearance of wheat promises to be the largest in history. Assuming continuation of moderate sized exports, the carryover next July 1 may be about 75 million bushels larger than the record carryover a year earlier. This is much less of an increase in carryover than seemed probable when it first became evident that the 1942 crop was the second largest in history.

Production in 1943 may possibly total about 850 million bushels. This is based on the December indication of a 625 million bushel winter wheat crop and an assumption that the spring crop will be about 225 million bushels.

Within a few days after the flour ceilings were raised, effective January 4, wheat prices at St. Louis reached the highest levels since 1928 and those at Kansas City the highest since May 1937.

Stocks of wheat in interior mills, elevators and warehouses January 1 were 235,221,000 bushels. Adding in wheat held on farms, combined stocks January 1 were 729,883,000 bushels—the greatest in 9 years of record. Combined stocks January 1, 1942 totaled 594,717,000 bushels and the 1935-41 average was 317,216,000 bushels.

RICE: Conservation

Rice millers were directed to set aside 60 percent of their stocks of milled rice on hand January 22, and 60 percent of rice milled after that date, for purchase by the Government. Purpose was to assure enough for residents of American Territories and for United States armed forces. Rice is a major food in the Caribbean area, and a staple food in Hawaii. The 40 percent of millers' supplies not covered by the order will be available to U. S. consumers, and for export to Cuba.

Stocks of rough rice on January 1 totaled 32,904,095 bushels or nearly half of the 1942 production. Stocks on January 1 last year were estimated at 28,354,484 bushels, or about 55 percent of 1941 production.

Total rough rice supplies in the 1942-43 marketing year are now indicated at 67 million bushels, consisting of a carry-over of 0.6 million bushels and a crop of 66.4 million bushels. Requirements for food use in the continental United States in 1941-42 were about 29 million bushels, compared with the 1935-39 average of 27 million bushels. Requirements to date this season have again been relatively large.

The average local price of rough rice in the U. S. was \$1.74 per bushel in mid-January.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid interest and taxes	Buying power of farm products ¹
1942			
January.....	149	146	102
February.....	145	147	99
March.....	146	150	97
April.....	150	151	99
May.....	152	152	100
June.....	151	152	99
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	169	154	110
November.....	169	155	109
December.....	178	² 150	² 114
1943			
January.....	182	158	115

¹ Ratio of prices received to prices paid, interest and taxes.

² Revised.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average August 1909-July 1914	January 1910-14 (average)	January 1942	December 1942	January 1943	Parity price, January 1943
Wheat (bushel).....cents.....	88.4	88.4	106.1	110.3	117.5	139.7
Corn (bushel).....do.....	64.2	58.9	72.7	80.2	88.0	101.8
Oats (bushel).....do.....	39.9	39.0	50.2	47.4	52.5	63.0
Rice (bushel).....do.....	81.3	-----	¹ 157.4	162.4	174.2	128.5
Cotton (pound).....do.....	12.4	12.2	16.93	19.55	19.74	19.59
Potatoes (bushel).....do.....	69.7	64.2	97.6	111.8	117.8	113.8
Hay (ton).....dollars.....	11.87	11.87	10.15	10.46	11.20	18.75
Soybeans (bushel).....do.....	-----	-----	1.65	1.59	1.59	1.52
Peanuts (pound).....cents.....	4.8	4.6	5.11	6.19	6.23	7.58
Peanuts for oil (pound).....do.....	-----	-----	4.07	3.97	3.97	3.71
Apples (bushel).....dollars.....	.96	1.00	1.16	1.43	1.60	1.52
Hogs (hundredweight).....do.....	7.27	¹ 7.05	10.69	13.27	14.07	11.49
Beef cattle (hundredweight).....do.....	5.42	¹ 5.23	9.72	11.43	11.78	8.56
Veal calves (hundredweight).....do.....	6.75	¹ 6.78	12.03	13.14	13.60	10.66
Lambs (hundredweight).....do.....	5.88	¹ 5.86	10.56	12.51	13.04	9.29
Butterfat (pound).....cents.....	26.3	29.2	¹ 36.2	48.9	49.6	² 43.2
Milk, wholesale (100 pound).....dollars.....	1.60	1.84	² 2.65	³ 3.04	3.02	² 2.68
Chickens (pound).....cents.....	11.4	10.8	17.0	20.5	22.1	18.0
Eggs (dozen).....do.....	21.5	28.0	31.3	39.7	39.0	² 32.3
Wool (pound).....do.....	18.3	18.5	¹ 37.1	39.7	39.5	28.9
Tobacco:						
Fire-cured-types 21-24 (pound).....do.....	² 13.6	-----	13.7	-----	16.4	13.6
Burley-type 31 (pound).....do.....	⁴ 22.2	-----	29.3	43.0	41.5	28.4
Maryland-type 32 (pound).....do.....	² 22.9	-----	38.0	33.5	-----	22.9
Air cured (dark) type 35-36 (pound).....do.....	-----	-----	-----	-----	-----	-----
Air cured (dark) type 37 (pound).....do.....	10.9	-----	12.5	13.2	15.6	10.9
Cigar filler type 41-44 (pound).....cents.....	14.6	-----	18.5	21.0	21.0	14.6
Cigar binder type 51-56.....do.....	-----	-----	11.4	-----	12.8	-----
-----	-----	-----	14.5	24.0	16.8	-----

¹ Revised.

² Base price crop years 1919-23.

³ Adjusted for seasonality.

⁴ Base price crop years 1934-38.

FRUITS: Production

Production of oranges indicated February 1 was 82.4 million boxes, 2.1 million smaller than a year earlier. Indicated production in California is down 17 percent. The grapefruit crop is estimated at 46.9 million boxes, 16 percent larger than a year earlier.

The commercial apple crop was estimated at 127.7 million bushels in 1942—about 5 percent above 1941. Cold-storage holding of apples January 1 were 30.6 million bushels compared with 25.8 million for the same month a year earlier.

POULTRY: Demand

Commercial hatchery production in December reached an all-time high for the month, reflecting a strong demand from areas which specialize in producing young chickens for meat. Hatcheries reported 91 percent of December output was in heavy breeds. Advance orders for replacement purposes have been much larger this winter than last. The demand for chicks is expected to remain strong, because of the favorable egg-feed price ratio in prospect. The ratio this coming spring may be the most favorable on record. Hatcherymen in many sections intend to start operations earlier than usual this year. OPA in early January announced that sales of shell eggs for hatching are exempt from price control, to aid attainment of the poultry production goals.

Storage stocks of shell eggs January 1 were the smallest since 1933. Although holdings of frozen eggs were relatively large, combined stocks of eggs in storage were the smallest since 1933. Large quantities of both shell and frozen eggs were used by drying plants in the last few months of 1942. Egg production in coming months will be much larger than a year ago, but supplies for civilians probably will be no larger.

The cents-per-pound ceilings for chickens announced December 18 generally are higher than levels that pre-

vailed under the temporary freeze order. Supplies of poultry in the next few months, though seasonally low, will be materially larger than a year earlier. Net withdrawals of poultry from storage began about 3 weeks earlier than usual this year. Holdings January 1 were about 10 percent smaller than a year earlier, but greater than average.

A strong demand for turkey poulters is expected this year. Hatcheries reporting had 33 percent more poults on order January 1 this year than last.

VEGETABLES: Goal increases

Easy to store and to ship, dry beans are rich in protein and energy needed by fighting men. The same is true of dry peas. Because they are so well suited to wartime food needs, 1943 goals for dry beans were increased in January to 3,300,000 acres, which is 55 percent more than the 2,135,000 acres planted in 1942. And goals for dry peas were raised to 725,000 acres—a 45 percent increase from last year's 501,000 acres planted. In addition to increasing the support price from \$5.35 to \$5.60 for new crop U. S. No. 1 beans and from \$5.20 to \$5.45 for U. S. No. 2 beans, cleaned and in bags, f. o. b. country shipping points, the Department of Agriculture also proposes a payment of \$20.00 an acre for dry beans planted in excess of 90 percent of the individual farm goal, up to 110 percent of the goal. Loans will be made on uncleaned beans so that farmers can get immediate returns from the crop. Proposed payment for planting dry peas would be \$15.00 on each acre between 90 and 110 percent of the goals.

Goals for sweet potatoes were increased in January to 1,000,000 acres, which is 41 percent above the 707,000 acres harvested last year. As compared with 1941, the 1942 crop of sweet potatoes was 9 percent smaller in the Central States and one-fourth larger in the Central Atlantic and Lower Atlantic States. For Irish potatoes, the goals were increased to

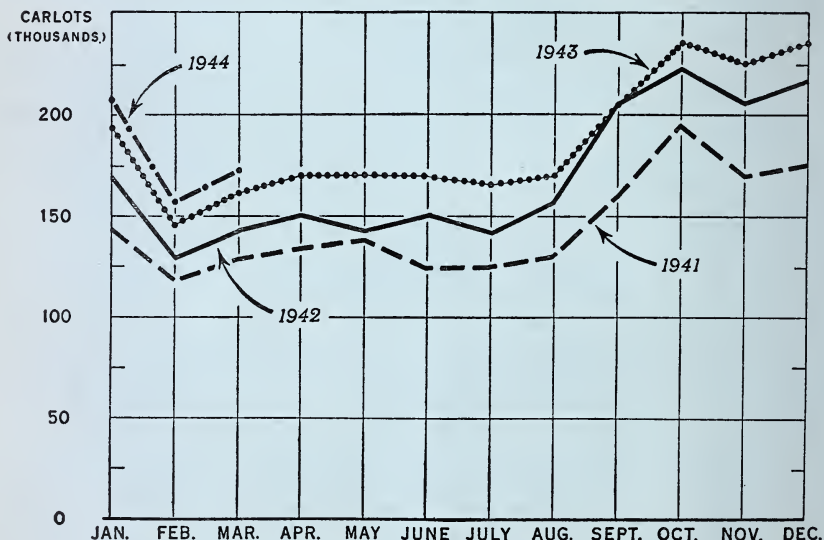
3,260,000 acres—17 percent more than the 2,793,000 acres planted in 1942. The Department of Agriculture proposes to pay farmers 50 cents a bushel on the normal yield of the acreage planted to potatoes after February 1 in excess of 90 percent of the individual farm goal, and up to 110 percent of the goal. It will also support potato prices at not less than 92 percent of parity. The proposed payment for planting sweetpotatoes is the same as for Irish potatoes. Reports received before this announcement indicated growers in the early, second early, and fall and winter States expected to harvest virtually the same acreage of Irish potatoes as they did last year, and 8 percent more than the 10-year average.

To encourage production of the more essential fresh vegetables, the Department of Agriculture will make a production payment averaging \$50 an acre for each acre of approved truck crops in excess of 90 percent and up to 110 percent of the truck crop goal.

Rail shipments of winter vegetables from January 3 to 16 were 32 percent above those of the preceding 2 weeks, but 10 percent below the corresponding period in 1942.

Onion stocks in the hands of growers and dealers January 1 were around 9 percent larger than a year earlier. Stocks of cabbage in the hands of growers and dealers January 1 were down 4 percent from a year earlier and about 3 percent below the 1932-41 average.

TRANSPORTATION LOADS FOR LIVESTOCK, ESTIMATED ON BASIS OF INDICATED MARKETINGS AND SHIPMENTS FROM PUBLIC MARKETS. UNITED STATES. JAN. 1941 - MAR. 1944



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

Livestock transportation is normally heaviest in October when cattle and sheep are being moved from western ranges in largest numbers. Attainment of the 1943 production goals, with a resulting large increase in hog marketings, may make the transportation load for livestock next December about equal to that in October.

WARTIME FOOD DISTRIBUTION

TO develop recommendations for distribution of the wartime food supply will be among the major functions of the newly organized Food Distribution Administration.

Here are some of the things on which the FDA will make recommendations for action by Secretary Wickard.

- Allocation of food supplies among the three major groups—the armed forces, the civilian population, and our allies;
- Programs for conservation of foods and for participation in such programs by consumers, food industries, public eating places, etc.;
- Rationing of various commodities to assure equitable distribution of the quantities available;
- Programs designed to bring about economies in the distribution of farm and food products;
- Development of programs for efficient warehousing and transportation of food;
- Regulation of the distribution of materials needed for processing food-stuffs.
- Public feeding programs including school lunch, school milk and others as appear necessary in the war effort.

The carrying out of the programs resulting from these recommendations will be, in most instances other than consumer rationing, the responsibility of the Food Distribution Administration. Its other activities will be the performance of those wartime functions formerly conducted by the Agricultural Marketing Administration, the Food Division and other food units of the War Production Board, the Sugar Agency of the Agricultural Conservation and Adjustment Administration and those units of the Bureau of Animal Industry concerned primarily with regulatory work. The functions and personnel of these agencies have been absorbed by the FDA.

SOME of the work of the FDA is already well known, as it is a continuation of activities begun many years ago, such as the standardization, inspection and grading of farm products, the Nation-wide market news service, and the regulation of various phases of marketing farm products. All these functions owe their existence to the every day needs of agricultural marketing, needs that continue and which must keep pace with the demands of war.

More in the news at the present time are those which are a direct outgrowth of the national defense and war programs. The purchase of foods for our fighting allies is a job that was started in the spring of 1941. Under this assignment commodities have been sent abroad to keep those nations fighting the Axis, principally Britain and Russia, supplied with additional food they need to help finish the job of finishing Hitler. The quantities of food delivered for shipment have bulked large. Though more than 8 billion pounds have been shipped in the past 18 months, the foods that we have provided to our fighting allies have been but a small part of our expanded production. Less than one-half of 1 percent of the beef, veal, lamb, and mutton produced in 1942 went to them. They got only about 4 percent of our pack of the major canned fruits and vegetables, less than 1 percent of our increased butter output, about 13 percent of our pork, and less than 10 percent of our eggs.

In recent months, purchases by FDA have been at the rate of more than \$5,000,000 daily. These purchases have been not only for our Allies. Some of the food has gone to feed our people in Hawaii, and in Puerto Rico and the Virgin Islands. Some of it has gone to the Red Cross for feeding of war prisoners and war refugees. Other foods have been used here at home in school lunches and for

direct distribution through State relief agencies.

The school lunch and school milk programs are transforming millions of children into a reserve of health and strength upon which peace can be built. These programs are playing an important part in our war-food activity on the home front. At the peak in March of last year, more than 6 million children in 93,000 schools, participated in the community school lunch program. It is hoped that an even larger number can be reached this year with foodstuffs provided in large part by FDA. Largely as a result of increased national attention given to nutrition of students, approximately 3 million children are taking part this year in the school milk program. The number of participants has tripled over a year ago.

OTHER functions of the FDA are almost completely new to the experience of the Department—functions arising out of the global character of the war and the wartime food program. The job of making recommendations regarding the allocation of foods among the armed forces, the allies and the civilian population is one of these. As a necessary corollary, FDA has been given the job of determining nutritional standards, to serve as the scientific basis for such allocations. It will rely upon the cooperation of the agencies and organizations which have research functions in this field.

A major part of the line work, or operating responsibilities, is centered in the nine commodity branches—Cotton and Fiber—Dairy and Poultry—Fats and Oils—Fruit and Vegetables—Grain Products—Livestock and Meats—Special Commodities—Sugar—and Tobacco.

Each of these branches, for the commodities under their jurisdiction, will initiate and carry out programs dealing with wartime food problems, including regulatory work, distribution economies, purchase and price support.

These branches will cooperate with the Food Production Administration to obtain needed production on the farm; will develop and administer programs for production in processed form; and will cooperate in the administration of distribution programs including allocation, reservation, limitation, and conservation orders, and recommend rationing plans. In addition they will cooperate with the food industries in improvement of processing, packaging and distribution techniques, recommend allocations of materials needed for processing plants, initiate and execute procurement programs, diversion programs, marketing agreements, and will conduct marketing investigations.

Working with these commodity branches and other agencies of the government will be the Requirements and Allocations Control which will assemble and analyze information on production, supply and requirements, for the purpose of formulating the allocation of food among the various claimant agencies such as the armed forces, the allies and the civilian population. Allocations will be made by the Secretary after consultation with the Food Advisory Committee and the Combined Food Board.

THREE branches of FDA will deal with problems of food requirements and programs on the home front. To set up nutritional standards that will provide the best possible diets for civilians will be the principal job of the Civilian Requirements Branch. It will serve as the "claimant agency" for civilian needs, preparatory to allocations for the many war uses. Special dietary needs of industrial workers and others engaged in the war effort will be studied. Development of new foods will be investigated. Working with the Agricultural Research Administration and the Food Nutrition Board of the National Research Council, this branch will focus on the nutrition problem the resources of outstanding workers in the field rather

than undertake new research projects.

A Civilian Programs Branch will administer and expand the school lunch and school milk programs and other public feeding projects as they are developed. Involved will be the establishment of food reserves for civilian use in case of emergency. This Branch also will work with the Food Conservation Branch in seeking cooperation in wartime food programs.

Assisting in getting the maximum results in processing and handling the foods produced on farms are four branches set up to determine allocation of materials under the Controlled Materials Plan, to work with industry advisory committees on problems arising from the wartime food programs. The Facilities Branch will assist on such problems as plant conversion, new processes, new containers, and the handling of requests for priorities for materials and equipment. The Processors Branch will provide a central point for handling day-to-day problems in connection with organizing, managing, and servicing national food manufacturers' and processors' industrial advisory committees. The Wholesalers and Retailers Branch will bring into focus the problems of wholesalers, retailers, brokers, restaurants, and other

food distributors. Another branch will work with the various food industries in formulating programs for the most effective utilization of manpower.

IN working with representatives of the food industry, the Department has adopted the policy of requiring that all persons employed shall be on a full-time paid rather than dollar-a-year basis. A Consultants Panel is being set up, however, under which highly qualified personnel, not available on a salary basis, will be called upon for advice. These consultants will have no positions with administrative responsibility, and no procurement functions.

In all of its various operations the Food Distribution Administration will be guided by one motive—to make food serve its most effective role as a weapon of war. From the farms where food is produced to the plants where it is processed, and through the various channels of marketing to the ultimate consumers whether they be fighting men on the front of North Africa or youngsters in the neighborhood school, the FDA will do its utmost to keep the maximum quantity of food moving into most effective uses toward winning the war.

ROY F. HENDRICKSON, *Director,*
Food Distribution Administration.

Mexican Trade Agreement

A RECIPROCAL trade agreement to facilitate trade between Mexico and the United States during the emergency and provide an improved basis for post-war trade expansion was concluded on December 23 between the two countries. The agreement became effective on January 30 and will remain in force for 3 years, unless terminated sooner under specified conditions, and will be subject to termination thereafter on 6 months' notice by either government.

Mexico makes tariff concessions in

the agreement on various United States products imported into that country, in return for concessions by the United States on many important agricultural and industrial products imported from Mexico. Although most exports from the United States to Mexico usually are of manufactured and processed commodities, and imports from Mexico are largely of raw materials, many concessions contained in both Schedule I (covering imports into Mexico) and Schedule II (covering imports into the United States)

are on agricultural items. The value of imports into the United States from Mexico in 1939, for the 27 principal agricultural items on which the existing duty is reduced or bound against increase in the agreement, was \$8,030,000. Of this amount, \$4,697,000 was the value of imports of feeder cattle needed by farmers and ranchmen for stocking and feeding purposes. The value of imports from Mexico of the 15 agricultural items bound on the free list was \$20,006,000. The value of Mexican imports from the United States in 1939 of the 49 principal agricultural items on which the existing Mexican duty is reduced or bound against increase was \$3,924,000, and the import value of the one agricultural item bound on the free list was \$146,000.

Agricultural concessions granted by Mexico cover many items needed in its economy. Mexico must supplement its own production of agricultural commodities by imports, particularly of lard and oilseeds, dried fruit, hops, cottonseed, barley, condensed and evaporated milk, cigarettes, and certain types of tobacco, and wheat in years of low domestic yields. The United States normally supplies from 50 to 100 percent of these imports. The agreement covers concessions on these items as well as others less important in past trade. The average value in 1939 and 1940 of Mexican imports from the United States of selected agricultural items covered in the agreement was:

	1,000 dollars
Lard.....	803
Wheat.....	682
Tanned hides.....	478
Hops.....	411
Barley malt.....	271
Fresh fruit.....	152
Breeding cattle.....	143
Barley grain.....	118
Cottonseed.....	107
Meat products.....	102
Dried fruit.....	82
Tobacco.....	81
Stearic acid.....	79

THE Mexican duty of approximately 2.2 cents a pound on lard imported in tank cars and tankers, and the duty of approximately 3 cents a pound on lard in other containers are both reduced in the agreement by 22 percent. Most of Mexico's lard imports, which fluctuate around 20 million pounds a year, comes from the United States.

Important reductions are made on three dried fruit items, amounting to 37.5 percent on raisins, 50 percent on prunes, and 75 percent on sliced dried fruit of any kind. The duty reductions on fresh fruits are less, being 14 percent on apples, and 29 percent on plums, peaches, pears, grapes, and fresh fruit not specified. Mexico produces little dried fruit, most of its supplies coming from the United States. Imports of fresh fruit, however, supply considerably less than a tenth of total consumption.

Hops, cottonseed, and barley grain are valuable imports from the United States on which duty reductions are made; the duty on hops is reduced 29 percent; on cottonseed, 25 percent, and on barley grain, 20 percent. The duty on wheat is reduced 40 percent, from approximately 56 cents a bushel.

Other duty reductions on Mexican imports range from a 13 percent reduction on Virginia type tobacco to a 33.3 percent reduction on hulled oats and onions. They also include a 25 percent reduction on dried milk and unshelled walnuts, 20 percent on canned asparagus, canned vegetable foods, and shelled walnuts, and a 19 percent reduction on cereals.

Breeding cattle are bound on the Mexican free list, and concessions in the form of bindings of the existing duties are made on sausage, ham, bacon, canned meats, not specified, canned meat foods even when containing vegetables, fresh eggs, evaporated milk, butter, cheddar cheese, stearic acid in cakes, tanned hides, tomato sauce, canned tomatoes, canned fruits in syrup or in their own juice, wheat flour, unhulled oats, barley

malt, raw tobacco filler, cigarettes, fruit essences or synthetic products without alcohol, grape juice and fruit juice.

THE agricultural concessions made Mexico by the United States include duty reductions or bindings on cattle, fresh fruit, and vegetables, as well as bindings on the free list of the following more or less non-competitive agricultural items: bananas, coffee, crude guayule rubber, broomroot, henequen and sisal, tampico fiber, crude chicle, horses or mules for immediate slaughter, breeding cattle, sarsaparilla root, lime oil, lignaloe or bois de rose, pimento (allspice), anise, and candellila wax. Most of the products bound on the free list are not produced in the United States, and the difficulty of obtaining them from far away places makes Mexico a more strategic supply source than ever.

The United States import duty on all weights of cattle is reduced in the agreement to 1.5 cents a pound without quantitative restrictions during the national emergency. Thirty days after the termination of the emergency respecting cattle and meats, entries of cattle at this reduced rate will be subject to quota limitations as follows:

On cattle weighing less than	Head
200 pounds.....	100, 000
On cattle weighing between	
200 and 700 pounds.....	400, 000
On cattle weighing 700	
pounds or more.....	225, 000

Entries in excess of these quotas will be dutiable at 2.5 cents a pound. These quotas are the same as those imposed under the trade agreement with Canada on the light-weight and heavy-weight cattle. Quotas have not existed hitherto on imports of the intermediate or feeder cattle class. The new quota is set somewhat below the previous maximum imports of feeder cattle. This is the class of cattle that has been most important in our trade with Mexico. Of the total imports of cattle from that

country in 1939, valued at \$5,937,000, imports of feeder cattle needed by United States farmers and ranchmen for stocking and feeding amounted to \$4,697,000.

Removal of the quotas on cattle imports during the emergency when domestic supplies of meat are low may tend to somewhat alleviate the stringent supply situation here. When the emergency is past, the quota limitations on imports in all classes should protect farmers in the United States against any drastic increase in cattle imports.

NEXT to the duty reduction on cattle, the most important reduction from the standpoint of past trade value is on fresh tomatoes. Imports from Mexico in 1939 were valued at \$445,000. The general duty is reduced from 3 cents to 1.5 cents a pound during the emergency, to relieve pressing current food needs. Thirty days after the termination of the emergency respecting tomatoes the duty will automatically be increased to 2¼ cents a pound. The preferential rate to Cuba on tomatoes is, therefore, 1.2 cents a pound for the emergency and 1.8 cents thereafter.

Duty reductions ranging from 33 to 50 percent are granted by the United States to Mexico on beans (green or unripe other than limas) not specially provided for, black-eye cowpeas (dried or in brine), peas (green or unripe), chickpeas or garbanzos (dried), garlic, fresh peppers, and squash. Seasonal duty reductions are made on lima beans (green or unripe), fresh eggplant, and fresh cucumber; and the existing duty on each of these products is bound against increase for the rest of the year. The import value of all these vegetables combined from Mexico in 1939 was \$470,000.

In addition to the concessions on bananas, duty reductions on other fruit are made on fresh pineapples in bulk, limes, mangoes, watermelon, and edible berries except blueberries in various stages of preparation; and existing duties on pineapples in crates

and preserved and prepared guavas are bound against increase.

A 50 percent reduction is made in the duty on sheep and lambs, live asses and burros, mules valued at not more than \$150 (unless imported for immediate slaughter), dried blood albumen, and citrus fruit juice unfit for

beverage purposes. Additional bindings of existing duties are granted on vanilla beans, horses valued at not more than \$150 (unless imported for immediate slaughter), honey, and mixed feeds.

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Neighbor Cooperation for Victory

FARMER neighbors in peacetime helped out each other in meeting their peak needs for labor, machinery, and other supplies. And now in war time, when shortages of labor, machines, supplies, and transportation are arising on all sides, neighbor cooperation has a more important role in agriculture than ever before.

Neighborhood arrangements for labor vary according to the sizes of farms involved. Operators of large farms frequently obtain their seasonal labor from small farms nearby. Small farm operators under these conditions usually prefer to work for wages rather than to exchange labor, because they need cash income more than they do extra labor. A recent study in Frankfort community, Kans., illustrates this situation (table 1). The study shows that small farmers worked on other farms more than did large operators. Most of the larger operators confined their work to running their power

equipment on a custom basis, or to other jobs requiring special skills, such as mechanical work and carpentry. Because of the wartime drain of labor from the farms, most small farmers and their families are receiving higher wages than before the war for work on other farms.

EXCHANGE of labor for other labor is an important factor in farming operations of many areas. New interest now is being shown in exchange of workers between farms in all sections of the United States. In parts of the Peanut Belt, neighboring farmers are helping to provide the 8-to 12-man crews of peanut pickers, formerly furnished by the machine owners. More exchange work is being done in planting, harvesting, threshing and other types of activities.

Work needs differ for different systems of farming and the extent to which labor can be exchanged varies.

TABLE 1.—Joint Labor Arrangements on Farms of Different Sizes, Frankfort Community, Kans., 1940¹

Size of farm (acres)	Operators who worked for wages on other farms		Operators who exchanged work with other farmers		Operators who hired labor	
	Percent	Days worked	Percent	Days worked	Percent	Days worked
0—99.....	44	21	57	7	25	6
100—199.....	22	39	80	13	60	46
200—299.....	7	82	84	15	59	57
300—399.....	18	16	82	19	75	61
400—699.....	0	0	93	16	83	83
700 and more.....	0	0	83	7	86	122

¹ Unpublished data from study by Kansas Agricultural Experiment Station and Bureau of Agricultural Economics.

In areas where most farmers grow a single cash crop—such as cotton, peanuts, peaches, sugar beets, broom-corn or wheat—there is relatively little opportunity for farmers to swap labor. Although some exchange of help is possible for them, the peak labor demands of most farmers tend to occur at the same times, thus reducing the possibilities of mutual aid. Even here, however, planned variations in planting dates can broaden the opportunities. Also, variations in choice of times for key operations on adjoining farms—in threshing, seeding broomcorn and picking peanuts, for example—can sometimes be made without damage to the crops. Activities of this kind, wherever carried on, are helping farmers to achieve maximum production with use of available labor and equipment.

Communities that have several different types of farms, as in parts of the Corn Belt, the Central Basin of Tennessee and the Shenandoah Valley of Virginia, are in best position of all to exchange labor. Seasonal labor peaks of many of these farms come at differing periods, or can be made to do so. The farmers therefore are in good position to trade their work back and forth. In these areas, farmers frequently get most of their extra labor for filling silos, shocking feed, and other tasks, through

exchange of work with their neighbors.

Always there are some jobs needed that do not have to be finished at any particular time, such as building and repairing fences, farm butchering, sawing and hauling wood, cutting brush from pastures, building terrace outlets, and hauling gum. Many farmers are accustomed to working with their neighbors to speed up these tasks. Wider cooperation in work of this type unquestionably will be helpful.

AS a response to war needs, exchange of hand labor for machinery services may soon be as widespread as direct labor exchange, extending the use of available machinery and labor. On some farms, and especially in the Southeast, time may be saved through exchanges of this kind, including shifts in the types of power and tools used (table 2).

Some farms are so small that the operators cannot afford to own binders, combines, tractors, or even two-horse equipment, and their incomes are so low that they cannot afford custom work. In many areas, greater efficiency for labor on the small farms is being obtained through exchange of the small farmers' labor for use of machinery from other farms. This procedure offers good returns to the

TABLE 2.—Labor Requirements for Old and Improved Practices for Selected Operations in the Southeast¹

Operation	Old practice		Improved practice		Labor saved by improved practice
	Implement and power	Labor required	Implement and power	Labor required	
		<i>Hours per acre</i>		<i>Hours per acre</i>	<i>Hours per acre</i>
Breaking land.....	2-mule turning plow ..	5	Tractor; plow.....	0.8	4.2
Planting cotton.....	1 or 2 mules; 1-row planter.	2	Tractor; 2-row planter.	.4	1.6
Cultivating (6 times over).	2-mule cultivator.....	8	Tractor; 2-row cultivator.	2.4	5.6
Plowing up peanuts.....	2 mules; 1-row peanut plow.	2	Tractor; 1-row peanut plow.	1.0	1.0
Shacking and stacking peanuts.	Hand labor.....	35	Tractor; side-delivery rake, stacked with forks.	8.0	27.0
Binding grain.....	3 mules; binder.....	1	Tractor; binder.....	.5	.5

¹ Based on studies made by Georgia and Alabama Experiment Stations in cooperation with Bureau of Agricultural Economics.

farmers involved. It is particularly suited to the needs of areas where there are large farms with adequate machinery that need labor, near to small farms that need machinery but have excess labor. Fair wage rates and rates for machinery services should be established to expedite such exchange. Groups of farmers in each community might well get together and work out fair rates of wages, machinery hire, and exchange bases. Farmer groups also often can help to work out definite schedules of machinery operations in a locality, to assure best use of available machinery, with profit to all.

THAT labor-machinery exchange works is shown by the experience of a farmer in Terrell County, Ga. This farmer used his side delivery rake in harvesting some of his neighbor's peanuts, receiving in return necessary man-labor to stack his own peanuts with forks. In the trade, labor was valued at the rate of \$1 a day, and the use of his machinery was valued at 40 cents per hour, plus fuel for the tractor. By the exchange, labor per acre to harvest the crop was reduced from about 35 hours to 8 hours.

Further illustration is given in a trade made by two neighboring farmers in the Wheat Belt. Both needed additional labor for their 1942 harvest. Also, one needed a combine and the other a truck although they had these between them. By pooling their labor and equipment they harvested their crops with little difficulty. This would not have been possible without the exchange.

In addition to these types of cooperation in use of machinery, many farmers have obtained necessary machinery through buying it jointly with other farmers. Group purchase and use is especially advantageous during wartime and for farmers whose farms are too small to permit full-time use of power equipment.

NOT alone in exchange of labor and equipment, however, is cooperation between farmers successful and desirable. In this time of national emergency, when best use of all farm resources is basically essential, still other avenues of cooperation are called for. Some farmers may find it desirable to work out exchanges of labor for the use of good land, to assure maximum efficient production and higher earnings to farmers generally.

Thousands of communities have farms on poor land, as well as on good land. More labor, of course, is required on the poor land, in proportion to output, than on the good land. If any considerable part of the good land is permitted to lie idle because of labor or equipment shortage while poorland is being cultivated, there is a waste of productive resources. In these cases, some of the farmers on poor land and those on good land may need to arrange for retirement or less intensive use of the poor land and for cultivation of the more productive soils.

For this purpose, a simple trade might be developed, based upon the share rent system of farming. On this basis, the farmer with the poorer land might rent the better land, retire his own, and farm the better land on crop share basis. The operator of the poorer farm might need to be compensated in some way, of course, for retiring his own cropland and making the change. This could be done perhaps by the owner of the good land paying the other farmer an inducement payment, in addition to a share of the crop, which would equal the taxes on the poorer land or by the owner allowing him the use of certain key items of equipment which would improve his efficiency. In some instances, part of the poorer farm's soil might be very productive and where the farms are nearby it might be desirable for the operator to continue to cultivate any highly productive land on the poorer farm. Trades of

this kind would avoid need for maintaining excess mules and equipment on poor farms.

NEIGHBOR cooperation in meeting feed and livestock problems is another aid to wartime production. Some farms are producing livestock and livestock products beyond their capacity to supply necessary feed. On the other hand, some farms are producing a surplus of certain feeds. When these conditions exist side by side in an area, some kind of exchange can usually be worked out that will be profitable to both parties. For example, many livestock farmers already trade surplus grain for the surplus hay of their neighbors. These trades, in addition to helping the farmers involved, conserve transportation, labor in handling, and storage—valuable war resources.

Cooperation in provision of sire service for breeding animals was frequent, even before the war. Now, however, many small farmers are entering the livestock field. Usually they are unwilling to pay for the services of good sires, with the result that poor

stock is produced. Wider development of cooperative ownership of sires would lead to better war production and greater profits for these farmers.

MARKETING and transportation difficulties also are open to attack through neighborhood action. Many farm communities work together to insure full truckloads to market, by posting local notices or otherwise exchanging information between farmers. Some of them designate local assembly points, where farmers take their goods for loading into larger trucks and most farmers alternate with others in using their automobiles and trucks for trips to town. Joint collection of milk, eggs, and other produce are growing in importance.

Some communities, of course, have developed the cooperative type of relationship more than have others. Where these relationships are now firmly established, the work now being done can prove a serviceable guide to other communities.

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Crop Yields in 1943

THE volume of crops that will be produced in 1943 and the kind of food that we will have on our tables a year hence will depend in large measure on how much the crops yield per acre. Some guesses or assumptions as to the yields per acre that may be expected are, therefore, important in laying plans for the future.

JUDGING from the frequency of favorable crop seasons in past years the chances that the crop yields of 1943 will average as high as the outstandingly high yields secured in 1942 do not seem better than perhaps 5 out of 100. On the other hand, the chances of securing yields equaling or exceeding the 1937-41 average (117 percent of the pre-drought average) would

seem to be fairly good, perhaps 50 or 60 out of 100. If it is assumed that there are equal chances that the weather of 1943 will resemble any one of the years for which we have records, then we must make allowance for the fact that about 1 year out of 7 has been dry enough to materially reduce crops in the United States. The tendency in estimating crops, however, is to lean heavily on results in recent years, not merely because those years are remembered best or because so many conditions are changing but because the weather seems to have certain "habits" which are not fully understood but may need to be allowed for. Thus, during the 1930-39 period there were so many dry seasons and so much hot summer weather in

the Central States that for several years it seemed necessary to be conservative in estimating prospects. The droughts also had cumulative effects, for in a number of States they caused progressive depletion of subsoil moisture, feed reserves, and range cover as well as of financial resources of the farmers. Now that there have been several favorable seasons in succession some of those watching the weather records are inclined to look back at the predominance of favorable crop years in States east of the Rockies during the 1896-1910 period which followed the frequent droughts of the preceding 10 years. Weather mathematicians who 9 years ago timed the return to a period of more adequate rainfall would probably see in the change further evidence of a vague and uncertain tendency for similar weather conditions to be repeated at irregular intervals of about 35 years as mentioned by Sir Francis Bacon before 1625 and charted by Bruckner in 1890. But whatever the method of calculation followed, the danger of an immediate return of disastrous droughts appears to be fading. There seems no reason now to assume that weather conditions in 1943 will be as unfavorable as they were during the exceptionally dry 1930-39 period when average yields of 6 crops (corn, wheat, oats, barley, flaxseed, and hay) covering three-fourths of our crop acreage were each lower than the average in any of the three previous decades.

LOOKING back at the 1930-39 period it is apparent now that while the low prices that prevailed during the depression years lessened the quantity of fertilizer used and caused other changes, the low yields of the period were due primarily to the succession of droughts. These were particularly severe in the Great Plains area where there has now been a marked change. During each of the last 2 crop years the 10 States extending into the area have had

roughly 40 percent more precipitation than the average during the preceding 7 seasons, and the present favorable moisture conditions in these States and in the northern half of the area west of the Rockies materially improve prospects for the small grain crops of 1943. The larger reserves of subsoil moisture should also help to lessen the losses of other crops during such short periods of drought as may occur. In the eastern half of the country, where losses from excessive rain average about as large as those from drought, there appear to be about equal chances that weather conditions affecting crops in 1943 will be better or worse than average.

ASIDE from irregular changes due to the weather, the yields of most crops have shown an upward trend during recent years. These trends can best be seen by using the reports received from crop correspondents on the "condition" of the various crops at about harvest time as though they provided a true measure of weather influences and related factors such as insect pests, floods, and the like. Thus, as a basis for comparison, if correspondents report the condition of a crop as 50 percent of normal and the yield turns out to be 20 bushels per acre it may be assumed that with "100 percent normal" or nearly ideal weather the yield

would have been about $\frac{20 \times 100}{50}$ or

40 bushels per acre. The "normal yields" computed in this way sometimes need to be adjusted for subsequent harvesting losses, abandonment, or regional shifts in the areas of production but, on the whole, they show marked stability from year to year and indicate the principal changes in crop yields that took place as a result of influences other than weather. For each crop they tell an interesting and revealing story.

IN the case of corn the "normal yield" per acre harvested, as thus computed, averaged close to 34.7 for each of the 3 ten-year periods beginning 1900, 1910, and 1920. It showed no tendency to rise till hybrid seed corn began to be important, but since 1937 the increase has been nearly a bushel per year, the indicated normal reaching 37.5 in 1939, 38.4 in 1940, 38.5 in 1941 and 40.8 in 1942. The increases in "normal yield" have occurred almost entirely in States where the use of hybrid corn has been increasing and the United States average may be expected to continue to rise gradually for some years as hybrids are introduced into new areas and as better hybrids are developed. In 1943 about half the corn acreage will be planted with hybrid seed and we may expect the United States "normal yield" for corn to be about 41 bushels per acre. If weather conditions are no better or worse than average we may expect an October condition of about 75 percent of normal, indicating a "probable yield" of about 30.8 bushels per acre harvested. This would be much below the record 35.5 bushel average of 1942 and below the 31.1 bushels harvested in 1941 but it would be above the yields in any earlier years except 1905 and 1906.

The 30.8 bushel "probable yield" indicated by this method of calculation is not really a forecast of what the yield will be but merely a midpoint to measure from. Judging from variations in the reported condition in past years there would appear to be about 1 chance in 4 that the yield will be below 28, and 1 chance in 4 that it will be above 32. Labor conditions may somewhat increase harvesting losses this year but after allowing for seed improvement, regional shifts in acreage, changes in fertilizer tonnage and composition, etc., the net effect of all such new developments this season seems likely to be unimportant as compared with the amount and distribution of the rainfall next summer in the Corn Belt States.

THE unprecedented wheat yield of 19.8 bushels per acre in 1942 was primarily the result of the exceptionally heavy rainfall in the Great Plains States where 70 percent of the crop was produced. While conditions have continued highly favorable in many States a repetition of last season's bumper yield seems only a remote probability. Wheat yields have been rising for several years but previously they were depressed by hot, dry seasons following expansion of acreage in the areas of low rainfall. Ten-year averages of yields per acre harvested, after rising from 12.5 in 1870-79 to 14.4 in 1900-09 declined gradually to 13.3 in 1930-39. Adjustments for weather conditions, however, show "normal yield" increasing more than a bushel each decade, rising from 13.2 in 1870-79 to 20.6 in 1930-39. This is an increase of 7.4 bushels in 60 years, but part of this may be due to more adequate allowance for abandonment. In recent years the tendency for yields to rise has been noticeable chiefly in the Pacific Northwest where yields are affected by relative acreage of winter and spring wheat and by changes in the proportion of the acreage seeded on cultivated summer fallow or on irrigated land. Moisture conditions are now very favorable in most of the Great Plains States and in the Pacific Northwest and the condition of winter wheat, as reported December 1, 1942, indicates a yield of 16.7 bushels per seeded acre. The good condition of winter wheat suggests that moisture is likely to be favorable for seeding spring wheat in the same States and a yield of 13 bushels per acre sown would seem a fair prospect. Putting together these indications and allowing for some abandonment suggests an all-wheat yield of about 16.6 bushels per acre as finally harvested.

YIELDS of oats, barley, rye and hay crops, like wheat, declined for some years prior to 1937 but apparently only because of adverse weather. Other factors are tending to raise yields.

"Normal yields" of oats have been increasing gradually for half a century. Recently most of the increases of significance have been in the West but some of the promising new varieties being introduced seem likely to cause a renewal of the upward yield trend in several North Central States. With average weather in 1943 the oats yield is likely to be around 32 bushels per acre harvested, or close to the average during the last 6 years.

The yield of tame hay crops in 1943 will depend largely on the rainfall next summer but, with average weather, it should average about 1.3 tons per acre, which would be not far from the average during the last 60 years. Recently the trend of yields per acre, aside from irregularities due to the weather, have been upward in most States from New York and Kentucky westward to Minnesota and Missouri. In this area the acreage of alfalfa and other high-yielding kinds of hay has been increasing. In the Dakotas, Nebraska, and Kansas where droughts reduced alfalfa from 3,241,000 acres in 1927 to 1,185,000 acres in 1939 the acreage was back nearly to 2 million by 1942. This is already helping to raise hay yields per acre. With a further increase of alfalfa probable in 1943 and subsoil moisture reserves back to normal in most areas, prospects for a good yield of hay crops in these states appear favorable. On

the other hand, increases in the acreage of peanuts harvested for both nuts and hay tend to increase hay production in peanut growing States but add more acres than tons to the hay totals, causing an apparent reduction in the average yield of hay per acre.

SORGHUMS are so largely grown in areas of light and uncertain rainfall that acreages and yields vary widely from season to season. The recent development of improved varieties, particularly those suitable for harvesting with a combine is helping to increase the acreage harvested for grain but there are no indications yet that the average yield is increasing. Allowing for usual difficulties as a result of local droughts it seems best not to count on a yield of more than about 14.3 bushels from the acreage harvested as grain. This seems low in comparison with yields of 18.7 and 18.2 in the last two seasons but yields higher than 14.3 were harvested in only 2 of the preceding 10 years.

COTTON yields declined from an average of 192 pounds of lint per acre during the 1890-99 decade to 162 pounds during the 1920-29 decade, due chiefly to the spread of the cotton boll weevil. Since 1930 the yields have been better and during the last 5 years they have ranged from 236 pounds in 1938 to the new peak of 275

Crop Yields per Acre, Past and Prospective. United States Averages for All Acreage Harvested

	All corn	All wheat	Oats	Barley	Tame hay	Cotton	Soy- beans	Beans	Pota- toes	Tobacco	28 crops percent of 1923-32 average
	<i>Bu.</i>	<i>Bu.</i>	<i>Bu.</i>	<i>Bu.</i>	<i>Tons</i>	<i>Lb.</i>	<i>Bu.</i>	<i>Lb.</i>	<i>Bu.</i>	<i>Lb.</i>	
1880-99.....	25.9	13.4	27.5	23.7	1.25	182	-----	-----	82.5	732	-----
1900-1919.....	26.6	14.3	29.9	23.2	1.31	185	-----	-----	96	818	-----
1920-29.....	26.8	14.0	29.7	22.7	1.32	163	-----	665	111	772	100.6
1930-36.....	21.4	13.1	26.1	19.9	1.19	187	14.6	729	108	806	94.2
1937-41.....	29.0	14.6	31.6	23.3	1.39	246	18.7	917	126	940	117.5
1942.....	35.5	19.8	35.9	25.4	1.53	275	19.5	995	137	1,027	136.7
Prospective 1943 with average weather ¹	30.8	16.6	32.0	23.3	1.3	250	17.8	875	130	990	120.0

¹ Prospects as of mid-January 1943, prior to announcement of Food Production order No. 5 governing uses of fertilizer. Estimates subject to change as season progresses.

pounds reached in 1942 when weather conditions were favorable in practically all of the important producing states. The tendency towards liberal use of fertilizers, characteristic of the last several years, will probably continue into 1943 to the extent that supplies are available. There would seem some justification for expecting the yield to be somewhere around the 250 pound average of the last 6 years rather than near the 200 pound level that would appear indicated by the assumption that weather, boll weevil infestation and other factors will be no more favorable than the average during the last 20 years.

YIELDS of potatoes, beans, soybeans, rice, tobacco, and various other crops have been increasing and prospects are for high yields if the weather continues to be favorable. The causes of the increases are various but include the growing of improved varieties, use of better methods of production and increased concentration of production in the highest yielding areas. Fifty years ago, when potatoes were grown mostly in small patches by hand methods, the yield averaged about 82 bushels per acre. In 1943 equally good weather would result in a yield of about 130 bushels per acre, for a substantial proportion of the acreage will be concentrated on farms specializing in this crop and using intensive methods such as close planting, liberal use of fertilizers and spraying to control diseases. Potato growers as a group are in the lead in the use of improved seed and the 1942 production of certified seed potatoes is sufficient to plant about two-thirds of the total acreage of potatoes in prospect for 1943. The yield of dry edible beans has been rising in all important States and the acreage grown has increased materially in California and Idaho where yields are high. Instead of a United States average of 11 bushels per acre expected with average weather 15 to 20 years ago, yields during the last 6 years have averaged over 15

bushels per acre and with even average weather in 1943 a yield of 14½ to 15 bushels may be expected unless it becomes necessary to materially expand the acreage in some of the low-yielding areas such as the pinto bean areas of the Southwest. The United States average yield of soybeans has increased about 50 percent during the last 15 years as a result of extensive changes in the varieties grown, changes in the method of production and a great expansion of the acreage in the high-yielding Central Corn Belt States. Average weather in 1943 should permit a yield of perhaps 17.8 bushels per acre.

RICE yields during the past 10 years have been nearly 60 percent above those harvested 40 years ago but with current expansion of the rice acreage to meet wartime requirements yields may be reduced temporarily by use of poorer land. Tobacco yields have recently been on a new high level, due chiefly to closer setting, liberal fertilization, and good care. With just average weather, the yield next year should be nearly 1,000 pounds per acre which would be above the yield in any past years except 1940 and 1942, and 200 pounds above the average yield during the last 50 years.

FRUIT production per acre has been rising for a long period. An increasing proportion of the orange and grapefruit groves are now approaching the age of full production and the gradual dying out of the older farm orchards of apples, pears, and peaches has eliminated most of the low-yielding fruit acreage. Trees and vines now remaining in production are largely in specialized fruit belts where yields per acre are high. In addition to increased yields per acre of the individual fruits the aggregate tonnage of all fruit per acre has been raised by the gradual substitution of the heavy yielding citrus fruits for the lower yielding deciduous fruits. Taking all tree and vine fruits together (except noncom-

mercial apples) the yield per acre has recently been above 4 tons per acre compared with about 2½ tons per acre 20 years ago. The continued heavy production of oranges, grapefruit, and lemons may be interrupted in any year by freezes severe enough to injure the trees, but present prospects for 1943 are for citrus fruits as a group to yield about 7 tons per acre of bearing age as compared with the 1920-29 average of 5.3 tons. Other tree and vine fruits should yield more than 3 tons per acre compared with the 1920-29 average of 2.1 tons.

The gross tonnage yield of commercial vegetables in 1942 was about 3.55 tons per acre, slightly higher than in any of the dozen previous years. Unusually favorable weather, liberal use of fertilizers, and stimulating prices apparently offset the labor difficulties

encountered in 1942 but it seems questionable if this will be true in 1943.

CONSIDERING all important crops except vegetables and all conditions now in sight which affect yield prospects for this season, there appears to be no development as yet which would prevent crop yields from going as high as they did in 1942 or from falling as low as in some of the drought years. But if weather influences are average, as compared with all past years for which we have records, the prospect is for crop yields to be about 12 percent below those of 1942, about 20 percent above the 1923-32 or pre-drought level, and 2 percent above the average during the 5 relatively favorable seasons 1937-41.

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War Units Plan

WAR unit values which have been given to all crops and livestock products important to the war effort are shown in the accompanying table. The number of war units produced in 1943 by a farm worker will be considered by local Selective Service Boards in determining his eligibility for deferment; and they will be considered by Department of Agriculture County War Boards in allocating scarce production supplies.

One war unit is the number of crop acres or the number of livestock that require approximately the same amount of labor (excluding seasonal peaks) as is necessary to keep one dairy cow.

As a national average, each regularly employed farm operator or worker should be able to produce 16 war units, if he has sufficient land and other resources. Inasmuch as many

farms are not now equipped to produce as much as 16 war units, however, Selective Service Regulations have suggested 8 war units as a floor for deferment purposes. On many farms, one worker can produce much more than 16 war units.

ONLY the labor of regularly employed workers performed directly on a particular crop or class of livestock is included in assigning war unit values. Labor hired seasonally for harvesting, for example, is not included. A farmer who bought all his feed would need 16 milk cows to have 16 war units on his farm, but a farmer who has 20 acres of corn (4 war units), 30 acres of oats (2 war units), and 20 acres of nonirrigated alfalfa hay (2 war units) would need only 8 cows to have a total of 16 war units on his farm.

War Unit Conservation Factors for Farm Products

Livestock and livestock products

	Number of animals or acres equal to one war unit
Beef cattle:	
Farm herds.....	10
Feedlot.....	20
Range.....	15
Stocker (bought and run on grass or grazed in fields).....	75
Dairy cattle:	
Milk cow.....	1
Other dairy cattle and calves.....	10
Hogs:	
Sows to farrow, spring.....	3
Sows to farrow, fall.....	3
Feeder pigs (bought and sold during year).....	30
Poultry:	
Broilers and ducks for market.....	600
Hens, laying pullets, and ducks for egg production.....	75
Flock replacement.....	300
Turkeys and geese.....	40
Sheep and goats:	
Farm flocks.....	30
Lambs in feedlot.....	160
Range sheep and goats.....	45
Milk goats.....	3
Stockers (bought and run on grass or grazed in fields).....	100

Crops

Fiber, oil crops, and potatoes:	
Castor beans.....	3
Cotton: American-Egyptian, Sea Island and Upland $1\frac{1}{4}$ inch and over.....	1.5
Upland under $1\frac{1}{4}$ inch.....	3
Flaxseed and soybeans.....	12
Hemp.....	5
Peanuts, Irish potatoes and sweet- potatoes.....	2
Field crops:	
Alfalfa hay (irrigated), broom corn, corn for grain and silage, dry edible beans, green peas for processing, rice, sweet corn for processing.....	5
Alfalfa hay seed, cover crop seed, non- irrigated alfalfa hay, grain sorghum, other tame hay and seed.....	10
Barley, dry field peas, oats and rye.....	15
Sweet corn for fresh consumption and hybrid seed corn.....	3
Wild or native hay.....	30
Wheat.....	20
Fruits:	
Plants and trees for fruit production re- placement and camouflage.....	10
Small fruit and berries: Blackberries, blueberries (tame), boysenberries, cranberries, currants, dewberries, gooseberries, grapes, loganberries, rasp- berries, strawberries, and young- berries.....	0.7

Crops—Continued

	Number of animals or acres equal to one war unit
Fruits—Continued.	
Tree fruit (deciduous and citrus):	
Bearing orchard (irrigated).....	1
Bearing orchard (nonirrigated).....	2
Nonbearing orchard.....	5
Medicinal, insecticide and rubber plants:	
Aconite, belladonna, digitalis, henbane, pyrethrum, guayule, and Kok-saghyz.....	0.4
Wood Products:	
Logs delivered to local mill (includes piling), board feet.....	10,000
Logs sawed in sawmill (on farm or nearby), board feet.....	5,000
Hewn railroad ties, number.....	200
Fence posts, number.....	500
Pulpwood, fuelwood, bolts for excel- sior, handles, etc., cords.....	15
Naval stores, faxes.....	200
Vegetables for fresh consumption and processing:	
Asparagus (from present plantings), beets, broccoli, brussels sprouts, cab- bage, carrots, chard, cauliflower, col- lards, escarole, green leafy lettuce, green pascal celery, green peas for fresh consumption only, peppers, kale, lima beans, mustard greens, onions, pars- nips, rutabaga, snap beans, spinach, tomatoes, and turnips.....	1
Vegetable plants and seeds.....	0.7
Other food and special crops:	
Honey, colonics.....	25
Tree nuts (bearing orchards):	
(a) Almonds, filberts, and walnuts.....	2
(b) Pecans (tame) and tung.....	5
Tree nuts (nonbearing orchards and re- placement stock).....	15
Sugar cane for sugar and syrup.....	1
Sugar beets, sugar beet seed, sorghum and sorgo syrup.....	2
Tobacco.....	0.5

No war unit credits

Special crops:	
Cantaloupes.	
Hops.	
Popcorn.	
Watermelons.	
Vegetables:	
Artichokes, celery (bleached), eggplant, and lettuce (Iceberg).	
Kohlrabi, cucumbers, horseradish, okra, radishes, and rhubarb.	
Garlic and leeks.	
Squash and pumpkins.	
Other crops not listed.	

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1935-39=100) ²	Cost of living (1935-39=100) ³	1910-14=100					Prices paid, interest, and taxes	Farm wage rates
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in—			Living	Production	Living and production
1926	96	131	126	146	162	146	155	168	179	179
1927	95	128	124	139	160	144	153	166	179	179
1928	99	127	123	141	160	148	155	168	179	179
1929	110	134	122	139	159	147	154	167	180	180
1930	91	110	119	126	150	141	146	160	167	167
1931	75	85	109	107	128	123	126	140	130	130
1932	58	59	98	95	108	109	108	122	96	96
1933	69	61	92	96	108	108	108	118	85	85
1934	75	76	96	109	122	123	122	128	95	95
1935	87	87	98	117	124	127	125	130	103	103
1936	103	100	99	118	123	125	124	128	111	111
1937	113	117	103	126	128	136	131	134	126	126
1938	89	91	101	115	122	125	123	127	125	125
1939	108	105	99	113	120	122	121	125	123	123
1940	123	119	100	115	121	124	122	126	126	126
1941	156	166	105	127	131	131	131	134	154	154
1942	180	232	116	144	154	150	152	152	201	201
1942—January	172	203	112	140	146	145	146	146	166	166
February	172	201	113	141	147	147	147	147	-----	-----
March	172	203	114	142	150	149	150	150	167	167
April	174	212	115	144	152	149	151	151	177	177
May	175	219	116	144	153	150	152	152	-----	-----
June	176	226	116	144	154	150	152	152	183	183
July	179	240	117	144	154	150	152	152	202	202
August	183	244	118	145	155	150	153	152	-----	-----
September	185	247	118	145	157	151	154	153	-----	-----
October	188	250	119	146	158	151	155	154	220	220
November	⁵ 194	² 265	120	146	159	151	156	155	-----	-----
December	196	272	120	147	159	153	² 158	¹ 156	-----	-----
1943—January	-----	-----	-----	-----	-----	-----	160	158	-----	223

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio, prices received to prices paid, interest, and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1926	131	122	138	143	147	152	159	145	86
1927	128	128	144	121	140	155	144	139	84
1928	130	162	176	159	151	158	153	149	89
1929	120	144	141	149	156	157	162	146	87
1930	100	102	162	140	134	137	129	126	79
1931	63	63	98	117	92	103	100	87	62
1932	44	47	82	102	63	83	82	65	53
1933	62	64	74	105	60	82	75	70	59
1934	93	99	100	103	68	95	89	90	70
1935	103	101	91	125	117	108	117	108	83
1936	108	100	100	111	119	119	115	114	89
1937	126	95	122	123	132	124	111	121	90
1938	74	70	73	101	114	109	108	95	75
1939	72	73	77	105	110	104	94	92	74
1940	85	81	79	114	108	113	96	98	78
1941	96	113	92	144	144	131	122	122	91
1942	119	155	125	199	189	152	151	157	103
1942—January	119	143	102	204	164	148	147	149	102
February	121	150	98	161	173	147	135	145	99
March	122	151	111	136	180	144	130	146	97
April	120	158	118	158	190	142	131	150	99
May	120	159	131	152	189	143	134	152	100
June	116	153	148	169	191	141	137	151	99
July	115	155	181	200	193	144	145	154	101
August	115	151	128	256	200	151	156	163	107
September	119	156	129	191	195	156	166	163	107
October	117	158	134	226	200	165	173	169	110
November	117	160	127	238	197	171	178	169	109
December	124	162	151	293	196	175	183	178	¹ 114
1943—January	134	164	139	277	205	177	185	182	115

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised November 1941. ³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5. ⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.